

INTERNATIONAL SEARCH REPORT

International Application No
PCT/NL2004/000503

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C12N1/00 C12N5/00 C12P13/04 C07B59/00 G01N33/58
G01N33/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C12N C12P C07B G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, EMBASE, MEDLINE, BIOSIS, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	HANSEN ANDREW P ET AL: "A practical method for uniform isotopic labeling of recombinant proteins in mammalian cells" BIOCHEMISTRY, vol. 31, no. 51, 1992; pages 12713-12718, XP002264470 ISSN: 0006-2960 cited in the application the whole document	1-22
X	WO 94/18339 A (MARTEK BIOSCIENCES CORPORATION; BROWN, JONATHAN, MILES) 18 August 1994 (1994-08-18) cited in the application the whole document	1-29

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the International filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the International filing date but later than the priority date claimed

- "T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the International search

24 March 2005

Date of mailing of the International search report

19/04/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl
Fax: (+31-70) 340-3016

Authorized officer

Meacock, S

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>LUSTBADER J W ET AL: "Expression of human chorionic gonadotropin uniformly labeled with NMR isotopes in Chinese hamster ovary cells: an advance toward rapid determination of glycoprotein structures." JOURNAL OF BIOMOLECULAR NMR. JUN 1996, vol. 7, no. 4, June 1996 (1996-06), pages 295-304, XP009045443 ISSN: 0925-2738 cited in the application abstract page 296, left-hand column - page 297, left-hand column</p> <p>-----</p>	23-27
X	<p>OPELLA S J ET AL: "Structures of the M2 channel-lining segments from nicotinic acetylcholine and NMDA receptors by NMR spectroscopy" NATURE STRUCTURAL BIOLOGY, vol. 6, no. 4, April 1999 (1999-04), pages 374-379, XP001155776 ISSN: 1072-8368 abstract page 377, right-hand column</p> <p>-----</p>	28,29
A	<p>ARCHER S J ET AL: "Transforming growth factor beta-1: NMR signal assignments of the recombinant protein expressed and isotopically enriched using chinese hamster ovary cells" BIOCHEMISTRY, AMERICAN CHEMICAL SOCIETY. EASTON, PA, US, vol. 32, no. 4, 1993, pages 1152-1163, XP002243159 ISSN: 0006-2960 the whole document</p> <p>-----</p>	
A	<p>TROPIS MARIELLE ET AL: "Composition and phase behaviour of polar lipids isolated from Spirulina maxima cells grown in a perdeuterated medium" BIOCHIMICA ET BIOPHYSICA ACTA, vol. 1284, no. 2, 1996, pages 196-202, XP002264471 ISSN: 0006-3002 abstract</p> <p>-----</p> <p>-/-</p>	

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>EGOROVA-ZACHERNYUK T A ET AL: "HETERONUCLEAR 2D-CORRELATIONS IN A UNIFORMLY ^{13}C,^{15}N! LABELED MEMBRANE-PROTEIN COMPLEX AT ULTRA-HIGH MAGNETIC FIELDS" JOURNAL OF BIOMOLECULAR NMR, ESCOM, LEIDEN, NL, vol. 19, no. 3, March 2001 (2001-03), pages 243-253, XP009019446 ISSN: 0925-2738</p> <p>-----</p> <p>WOOD MATTHEW J ET AL: "Production of large quantities of isotopically labeled protein in <i>Pichia pastoris</i> by fermentation" JOURNAL OF BIOMOLECULAR NMR, vol. 13, no. 2, February 1999 (1999-02), pages 149-159, XP009019488 ISSN: 0925-2738 the whole document</p> <p>-----</p>	
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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

The additional search fees were accompanied by the applicant's protest.
 No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-22 (completely)

A method for producing a nutrient medium for growing mammalian or insect cells in culture; a method for producing a biomolecule comprising culturing mammalian or insect cells in the said nutrient medium and recovering the expressed biomolecule; a method for obtaining structural information about a biomolecule comprising producing the biomolecule according to said method and analysing the biomolecule.

2. claims: 23-27 (completely)

A nutrient medium for the production of an isotopically labelled biomolecule from mammalian or insect cells, the medium comprising (a) a mixture of inorganic salts, (b) a source of amino acids, (c) a carbohydrate energy source and (d) a source of lipids, wherein for components (a) - (c) either substantially all atoms are isotopically labelled for at least one of H, C or N, or 20-100% of the hydrogen atoms are uniformly substituted with the isotope 2H.

3. claims: 28, 29 (completely)

A mammalian membrane protein whereby substantially all atoms in the protein are isotopically labelled with an isotope selected from ^{15}N , ^{13}C , ^{2}H , ^{15}N and ^{13}C , ^{15}N and ^{2}H , ^{13}C and ^{2}H , or ^{15}N , ^{13}C and ^{2}H .

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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Patent document cited in search report	Publication date	Patent family member(s)		Publication date
WO 9418339	A 18-08-1994	US 5393669	A	28-02-1995
		AT 221918	T	15-08-2002
		AU 711468	B2	14-10-1999
		AU 3608797	A	04-12-1997
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		DE 69431142	T2	09-10-2003
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		FI 943745	A	15-08-1994
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		JP 2004115528	A	15-04-2004
		NO 943703	A	23-11-1994
		PT 636183	T	29-11-2002
		TW 381178	B	01-02-2000
		WO 9418339	A1	18-08-1994
		US 5627044	A	06-05-1997
		US 5817474	A	06-10-1998